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Distribution of Manganese in the USSR

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## DISTRIBUTION OF MANGANESE IN THE USSR

Deposits at Mazyata and Polonchnoya supply:

The northern and central Urals

Deposits at Abzelilovskiy supply:

The southern Urals

Deposits at Mazul'skiy (Krasnoyarsk) supply:

Stalinsk

Deposits at Nikopol' supply:

Nikopol', European Russia, the Ukraine, the Dnepr (region), the Donets

Deposits at Chiatura supply:

(Manganese for) exportation, the Urals, Stalinsk

Transcript,  
Wi Kdo Kharkov  
Division W

29 April 1942

## Manganese Ore Deposits and Extraction in the Soviet Union

The total known deposits in the Soviet Union on 1 January 1938 amounted to 785,000,000 tons, of which 230,000,000 tons were included in Categories A and B, 1,142,000 tons in C<sub>1</sub>, and 413,000,000 tons in C<sub>2</sub>.

Distribution of the deposits according to regions:

<u>Location</u>	<u>Total</u>	<u>A and B</u>
Ukrainian SSR	522,183,000 tons	72,092,000 tons
Georgian SSR	175,184,000 tons	164,474,000 tons
Azerbaydzhan SSR	50,000 tons	-
Khazakhstan	36,786,000 tons	1,366,000 tons
Krasnodar Kray	33,900,000 tons	-
Urals	13,700,000 tons	3,094,000 tons
Siberia	3,007,000 tons	983,000 tons
Far East	110,000 tons	10,000 tons
	<u>784,920,000 tons</u>	<u>242,019,000 tons</u>

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## Manganese extraction:

1937 2,700,000 tons, of which about one million tons were exported

1942 5,500,000 tons (planned)

(1) The most important manganese ore region remaining in the Soviet Union is in the Georgian SSR, and here the most significant are the deposits at Chiatura. The manganese ore at Chiatura is of a particularly high quality. Its composition (in percent) is as follows: Fe 1.1, Mn 51.8, SiO<sub>2</sub> 9.5, P 0.2, Al<sub>2</sub>O<sub>3</sub> 1.88, CaO 2.0. In addition, peroxide ore of high quality, which contains 70-80 percent manganese hyperoxide, is also available. The Chiatura deposit is intersected by a narrow-gauge railroad line, which extends from the Sharopon Station to Sachkhere. The Valley of the Kvirila River divides the area into two parts in which the various manganese ore deposits are situated.

## Manganese extraction:

1937: 1,485,000 tons

1942: 2,200,000 tons (planned)

The region  
1 Supply 75 percent of the total foreign export of manganese of the Soviet Union. A part of the ore is diverted to the Zestafoni Ferromanganese Plant, located in the Chiatura area. The other part is sent to the Urals and Siberia.

(2) Another manganese deposit is found in the Caucasus at Labinsk (60 kilometers from Krasnodar on the Armavir-Tuapse Railroad in the vicinity of the Laba River). According to Professor Toney the manganese extraction, which is still in its initial phase, has been approximately 20,000 tons annually during recent years. The ore requires mechanical preparation since it is full of stones.

(3) The manganese deposits on the borders of the Bashkir ASSR amount to about 5,600,000 tons. In 1937 approximately 80,000 tons were extracted. These deposits supply the needs of the Magnitogorsk Plant. In the Bashkir ASSR the geological characteristics of 37 deposits have been thoroughly investigated. The composition of the ore is as follows: Manganese 19-34 percent, phosphorus 0.004-0.086 percent.

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Only the best ores contain as much as 40-45 percent manganese.

Transportation is a particularly difficult problem here.

(4) In the Urals manganese deposits are to be found in the vicinity of Chelyabinsk and Sverdlovsk. These deposits yield about 8,000,000 tons. The most important locations are: Polunochnoye, Baryatinskiy, and Borsyatskoye. Manganese content of the ore is 10-30 percent.

The deposits make possible the satisfaction of the ore requirements of the iron and steel plants in the Urals.

Manganese ore is found in the vicinity of Bogoslovsk (northern Urals), along the Polunochnaya River adjacent to the Samskrokoslovsk Railroad. In 1940 about 10,000 tons were said to have been produced.

(5) Siberia. In the Krasnoyarsk region the Mossulski deposit is located, which has already been explored. The quantity of manganese ore is as follows: Category A - 728,000 tons, Category B - 251,000 tons, and category C - 459,000 tons. The ore extractions were as follows: 1937 - 65,000 tons, 1939 - 100,000 tons, 1942 - 400,000 tons (planned). The composition of the ore: Manganese 80.5 percent, iron 15 percent. In addition the ores contain small quantities of cobalt and nickel. Still another series of manganese deposits is to be found in the Krasnoyarsk region, such as, Gornaya-Shordiya, all of which are important as suppliers of the Kusbass iron and steel plants.

(6) In 1939 the Ivanov deposit was discovered on the headwaters of the Ussi River (in the Novorossisk region). This is one of the largest deposits in the Soviet Union, and geological prospecting is now said to be in full swing. The greatest difficulty here is the transportation problem. The planned South Siberian Railroad (Yuzhsib) requires the construction of one or two railroad bridges over the Yenisei. The difficulty of this project is such, that at the beginning of the war it had not yet been undertaken.

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(7) In the Far East the Vantanskiy manganese deposit is the only one known. It has a manganese content of 13 percent and is difficult to process.

(8) Khazakhstan. A series of deposits, such as Chesdonskoye, Meysadaskoye, Mongishlagskoye, etc., have been geologically explored. The initial assessment of these reserves was set at 32,760,000 tons and they have been put to use during the past year.

Ukrainian SSR. Professor Turney has called the attention of Wl Kdo to the fact that in addition to the Nikopol deposit in the Ukrainian SSR there is still another manganese deposit in the Gaysin area in the vicinity of the Vinnitsa-Portgorodnoye Narrow-Gauge Railroad. The ore contains an average of 32 percent manganese: the known reserves amount to approximately 3,000,000 tons. In 1920 small quantities were used. At the time of the German occupation of the Ukraine during World War II the German military authorities paid particular attention to these deposits since the ore can be extracted from open pits.

Maintenance of the Eastern Manganese Ore Deposits.

During 1937 there were transported to the Kuzbass 206,000 tons of manganese ore from Chiatura and 47,000 tons from Nikopol. The ore sent from Chiatura to Stalinsk (Kuzbass) was about two months in transit. The distance is about 5,000 kilometers.

(signed) J. Theile  
KVR.

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USSR - Manganese Extraction Planned for 1942 as well as Quantity  
Actually Achieved between 1 January and 30 September 1942

<u>Region</u>	<u>Planned</u>	<u>Achieved</u>
Chiatura District (Transcaucasus)	2,400,000 tons	1,670,000 tons
Orenburg District (Urals) (this district was enlarged in 1941/1942; further exploration will be undertaken)	250,000 tons	196,160 tons
Krasnoyarsk District (Siberia) (this district was developed in 1941/1942; further exploration will be undertaken)	200,000 tons	156,340 tons

Time of Report: End of November 1942.  
Source: V-Mann Weide (?), secure.

/Note write-in translation of tables in document/

/Note overlay for stratum sketch of the manganese ore mines at Chiatura/

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TranscriptEnclosure 1Characteristics of the Manganese Deposits at Chiatura

<u>Name of Pit</u>	<u>Ore Deposit</u>	<u>Operating Pits</u>	<u>Richness of the Pit</u>	<u>Utility of the Pit</u>
Voroshilov Pit	Kwegargani	1	1.2-1.5	-
Beriya Pit	Xgani	1	0.9-2	0.7-1.7
Ordzhonikidze Pit	Sedarrgani	1	1.5-1.76	1.5-1.7
Ordzhonikidze Pit	Tabograbi	1	1.10-1.2	1-1.20
Kaganovich Pit	Mguimbij	1	2.3-3.5	2.1-2.6
Dimitriyev Pit	Darkweti	1	1.8-	1.48
Dimitriyev Pit	Its&hwissi	1	1.9-2.2	1.5
Lenin Pit	Schugruti	1	3.2-3.6	2.5
Stalin Pit	Perewisi	1	2.5-4	3.2-2.52

<u>Name of Pit</u>	<u>Declination of the Pits</u>	<u>Quantity of Ore per Sq. Meter</u>	<u>Manganese</u>	<u>MnO<sub>2</sub></u>
Voroshilov Pit	NE 0.8°	4.5-4.74 t	36.15	-
Beriya Pit	NE 0-6°	3.99-4.26 t	40-42.5	-
Ordzhonikidze Pit	NE 2° 10' to 3°	3.40-3.76 t	45	80%
Ordzhonikidze Pit	NE 1 to 3° 40'	3.00-3.05 t	-	80-90%
Kaganovich Pit	NE 1-2°	6.21-6.18 t	45-46	-
Dimitriyev Pit	NE 1-1° 40'	3.98	25-37	-
Dimitriyev Pit	NNE 1° 51'-2°	3.46	26-37.71	-
Lenin Pit	NE 0-1° 30'	5.84-5.46	30-38.5	-
Stalin Pit	NE 0-6-8°	6.9 - 7.30	30-38.5	-

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